

CLAIMS

What is claimed is:

1. A ventilated cage and rack system for housing at least one cage assembly, said system comprising:

a ventilated rack, the rack including at least one air exhaust plenum; and

at least one canopy disposed within said rack, the canopy being adapted to position said cage assembly below the canopy while maintaining a gap between the top of said cage assembly so as to permit air to be drawn into the air exhaust plenum from the interior of said cage assembly through the top of said cage assembly and to also permit ambient air to be drawn across the top of said cage assembly into the air exhaust plenum;

wherein said cage assembly comprises at least one of a first cage having a first width and a plurality of second cages having a second width, said second width being less than said first width.
2. The ventilated cage and rack system of claim 1, wherein said plurality of second cages consists of two second cages.
3. The ventilated cage and rack system of claim 1, wherein said canopy comprises a channeling element adapted to facilitate said drawing of ambient air across said top of said cage

assembly into the air exhaust plenum when said cage assembly comprises a plurality of said second cages.

4. The ventilated cage and rack system of claim 2, wherein said canopy comprises a channeling element adapted to facilitate said drawing of ambient air across said top of said cage assembly into the air exhaust plenum when said cage assembly consists of two cages.

5. The ventilated cage and rack system of claim 3, wherein said canopy further comprises a rear channel wall disposed adjacent said channeling element and adapted to facilitate said drawing of ambient air across said top of said cage assembly into the air exhaust plenum when said cage assembly comprises a plurality of said second cages.

6. The ventilated cage and rack system of claim 4, wherein said canopy further comprises a rear channel wall disposed adjacent said channeling element and adapted to facilitate said drawing of ambient air across said top of said cage assembly into the air exhaust plenum when said cage assembly consists of two second cages.

7. The ventilated cage and rack system of claim 5, wherein said canopy further comprises one or more flow tabs disposed at a rear edge of said canopy, said one or more flow tabs being adapted to facilitate said drawing of ambient air across said top of said cage assembly into the air exhaust plenum when said cage assembly comprises a plurality of said second cages.

8. The ventilated cage and rack system of claim 6, wherein said canopy further comprises one or more flow tabs disposed at a rear edge of said canopy, said one or more flow tabs being adapted to facilitate said drawing of ambient air across said top of said cage assembly into the air exhaust plenum when said cage assembly consists of two cages.

9. The ventilated cage and rack system of claim 2, wherein each of said two second cages are secured within said ventilated rack by a corresponding cage lock, said cage locks being disposed on said ventilated rack such that said cage locks are disposed about non-adjacent sides of said cages.

10. The ventilated cage and rack system of claim 1, wherein said canopy comprises a discrete reinforcement member disposed on a front edge of said canopy.

11. The ventilated cage and rack system of claim 1, wherein said canopy is attached to said air exhaust plenum and communicates with said air exhaust plenum through ducts in said air exhaust plenum.

12. The ventilated cage and rack system of claim 1, wherein said rack further comprises at least one air supply plenum and wherein said canopy positions said cage assembly to receive air from said air supply plenum.

13. The ventilated cage and rack system of claim 1, wherein said canopy further comprises a top plate, a left side wall and a right side wall.

14. The ventilated cage and rack system of claim 13, wherein the top and side plates are of substantially the same length as the length of said cage assembly in the rack.

15. The ventilated cage and rack system of claim 13, wherein each of said side walls is substantially perpendicular to the top plate.

16. The ventilated cage and rack system of claim 13, wherein said top plate and said left and right side walls are formed as a unitary member.

17. The ventilated cage and rack system of claim 13, wherein each said cage of said cage assembly further comprises a bottom portion with side walls and a filter cap, the filter cap having side walls which overhang the side walls of the bottom portion of the cage when the filter cap is mounted on the bottom portion, and wherein each of said left and right side walls of the canopy further comprise a lip extending perpendicularly from the side plate so that the lips extend underneath at least a portion of the overhanging side walls of the filter cap of the second cage.

18. The ventilated cage and rack system of claim 1, wherein said at least one canopy is substantially comprised of a transparent material.

19. The ventilated cage and rack system of claim 1, wherein said at least one canopy is substantially comprised of clear plastic.

20. A ventilated rack for housing cages having different widths, said system comprising:
a ventilated rack, the rack including at least one air exhaust plenum; and
one or more canopies disposed within said rack, at least one of said canopies being adapted to position either one cage having a first width, or two cages having a second width below the canopy so as to permit air to be drawn into the air exhaust plenum from the interior of each cage, the first width being greater than the second width.

21. The rack of claim 20, wherein said at least one of said canopies is adapted such that a gap is maintained between the top of the cages so as to permit air to be drawn into the air exhaust plenum from the interior of said cages.

22. The rack of claim 21, wherein said at least one of said canopies is adapted such that ambient air is drawn across the top of said cages into the air exhaust plenum;

23. The rack of claim 22, wherein said at least one of said canopies further comprises a rear channel wall disposed adjacent said channeling element and adapted to facilitate said drawing of ambient air across said top of said cages.

24. The rack of claim 22, wherein said at least one of said canopies comprises a channeling element adapted to facilitate said drawing of ambient air across said top of said cages.

25. The rack of claim 22, wherein said at least one of said canopies further comprises one or more flow tabs disposed at a rear edge of said canopy, said one or more flow tabs being adapted to facilitate said drawing of ambient air across said top of said cages.

26. The rack of claim 22, wherein each of said cages are secured within said ventilated rack by a corresponding cage lock, said cage locks being disposed on said rack such that said cage locks are disposed about non-adjacent sides of said cages.

27. The rack of claim 22, wherein said at least one of said canopies comprises a discrete reinforcement member disposed on a front edge of said canopy.

28. The rack of claim 22, wherein said at least one of said canopies is attached to said air exhaust plenum and communicates with said air exhaust plenum through ducts in said air exhaust plenum.

29. The rack of claim 22, wherein said rack further comprises at least one air supply plenum and wherein said at least one of said canopies positions said cages to receive air from said air supply plenum.

30. The rack of claim 22, wherein said at least one of said canopies further comprises a top plate, a left side wall and a right side wall.

31. The rack of claim 30, wherein the top and side plates are of substantially the same length as the length of said cage assembly in the rack.

32. The rack of claim 30, wherein each of said side walls is substantially perpendicular to the top plate.

33. The rack of claim 30, wherein said top plate and said left and right side walls are formed as a unitary member.

34. The rack of claim 20, wherein said at least one canopy is substantially comprised of a transparent material.

35. The rack of claim 20, wherein said at least one canopy is substantially comprised of clear plastic.

36. The rack of claim 30, wherein each said cages further comprises a bottom portion with side walls and a filter cap, the filter cap having side walls which overhang the side walls of the bottom portion of the cage when the filter cap is mounted on the bottom portion, and wherein each of said left and right side walls of said at least one of said canopies further comprises a lip extending perpendicularly from the side plate so that the lips extend underneath at least a portion of the overhanging side walls of the filter cap of the cages.

37. A cage level barrier cage, comprising:

a cage bottom having a plurality of integral side walls, a floor and an open top end,
and a peripheral lip extending continuously around said top end;
first and second opposing recesses formed in said peripheral lip;
third and fourth opposing recesses formed in said peripheral lip;
a feeder assembly having a base, said base having first and second flanges extending
therefrom so that when said feeder assembly is disposed in said cage bottom
said flanges are received within a respective one of said first and second
recesses, or a respective one of said third and fourth recesses; and
a bonnet dimensioned and sized for sealing said top end.

38. The cage level barrier cage of claim 37, wherein said base of said feeder assembly comprises two fluid compartments at apposing sides of said base, and a food module disposed between said fluid compartments.

39. The cage level barrier cage of claim 38, wherein said fluid compartments have rounded bottom portions.

40. The cage level barrier cage of claim 39, wherein said bottom portions define apertures adapted to facilitate the flow of fluids therethrough.

41. The cage level barrier cage of claim 38, wherein said food module comprises a wire food module disposed at the bottom of said food module.

42. The cage level barrier cage of claim 37, wherein said bonnet includes a top for covering said top end of said cage bottom.

43. The cage level barrier cage of claim 42, wherein said top has a surface, said surface being perforated for allowing air to pass to and from said cage bottom.

44. The cage level barrier cage of claim 42, wherein said top has a perimeter and further comprises a vertical portion descending from said perimeter of said surface, and a border horizontally extending from said vertical portion, wherein when said top is placed on said cage bottom, said border contacts said peripheral lip thereby substantially sealing said cage bottom.

45. The cage level barrier cage of claim 42, wherein said top has a plurality of cross beams.

46. The cage level barrier cage of claim 42, further comprising two filter retainers, said filter retainers having a perforated surface for allowing air to pass to and from said cage bottom.

47. The cage level barrier cage of claim 42, further comprising two filter shields, said filter shields having a perforated surface for allowing air to pass to and from said cage bottom.

48. The cage level barrier cage of claim 45, further comprising two filters disposed on said plurality of cross beams for filtering air entering said cage bottom through said top.

49. The cage level barrier cage of claim 48, further comprising two filter retainers, said filter retainers having a perforated surface for allowing air to pass to and from said cage bottom.

50. The cage level barrier cage of claim 49, further comprising two filter shields, said filter shields having a perforated surface for allowing air to pass to and from said cage bottom.

51. A cage level barrier cage, comprising:

a cage bottom having a first pair and a second pair of integral side walls, a floor and an open top end, and a peripheral lip extending continuously around said top end;

first and second opposing recesses formed in said peripheral lip at first respective centers of said first pair of integral side walls;

third and fourth opposing recesses formed in said peripheral lip at said second pair of integral side walls;

fifth and sixth opposing recesses formed in said peripheral lip at said second pair of integral side walls; and

a bonnet dimensioned and sized for sealing said top end.

52. The cage level barrier cage of claim 51, further comprising a feeder assembly having a base, said base having first and second flanges extending therefrom so that when said

feeder assembly is disposed in said cage bottom said flanges are received within a respective one of said first and second recesses.

53. The cage level barrier cage of claim 52, wherein said base of said feeder assembly comprises two fluid compartments at apposing sides of said base, and a food module disposed between said fluid compartments.

54. The cage level barrier cage of claim 52, wherein said fluid compartments have rounded bottom portions.

55. The cage level barrier cage of claim 54, wherein said bottom portions define apertures adapted to facilitate the flow of fluids therethrough.

56. The cage level barrier cage of claim 55, wherein said food module comprises a wire food module disposed at the bottom of said food module.

57. The cage level barrier cage of claim 55, wherein said feeder assembly comprises at least one feeder recess defined in a peripheral lip of said base such that when said feeder assembly is disposed in said cage bottom, said feeder recess is aligned with at least one of said third, fourth, fifth or sixth recesses.

58. A cage level barrier cage, comprising:

a cage bottom having a plurality of integral side walls, a floor and an open top end,
and a peripheral lip extending continuously around said top end;
a bonnet dimensioned and sized for sealing said top end;
wherein said bonnet includes a top for covering said top end of said cage bottom.

59. The cage level barrier cage of claim 58, wherein said top has a surface, said surface being perforated for allowing air to pass to and from said cage bottom.

60. The cage level barrier cage of claim 58, wherein said top has a perimeter and further comprises a vertical portion descending from said perimeter of said surface, and a border horizontally extending from said vertical portion, wherein when said top is placed on said cage bottom, said border contacts said peripheral lip thereby substantially sealing said cage bottom.

61. The cage level barrier cage of claim 58, wherein said top has a plurality of cross beams.

62. The cage level barrier cage of claim 58, further comprising two filter retainers, said filter retainers having a perforated surface for allowing air to pass to and from said cage bottom.

63. The cage level barrier cage of claim 58, further comprising two filter shields, said filter shields having a perforated surface for allowing air to pass to and from said cage bottom.

64. The cage level barrier cage of claim 62, further comprising two filters disposed on said plurality of cross beams for filtering air entering said cage bottom through said top.

65. The cage level barrier cage of claim 6448, further comprising two filter retainers, said filter retainers having a perforated surface for allowing air to pass to and from said cage bottom.

66. The cage level barrier cage of claim 65, further comprising two filter shields, said filter shields having a perforated surface for allowing air to pass to and from said cage bottom.